

Further observations on *Cygnus Passmori* and *C. buccinator*.

By the Rev. W. HINCKS, F.L.S.

[Read June 6, 1867.]

Toronto, May 19, 1867.

My note of April 10, 1864, published in the Journal along with my paper on *Cygnus Passmori*, although intended to leave the question undecided, would doubtless be considered to favour the opinion that the supposed species is no more than a younger and less-developed form of *C. buccinator*.

I was not, indeed, myself satisfied with that opinion, which set aside all my observed distinctive marks except that taken from the sternum, and assumed that, because specimens were procured indicating progressive changes in the appearance of this part, all these changes could be reduced to one series; but it was my duty to report the facts which came to my knowledge; and for the moment these seemed to be at least reconcilable with the notion of only one species.

I have since taken every opportunity of obtaining further materials for judging, and as the result of the past winter's observations I can lay before the Society such additional facts as may, I think, enable us to settle the question.

I have now before me six sterna of our northern swans, the comparative size and external appearance of each of the birds being also known to me. One of these belongs to the original specimen named by me *C. Passmori*, the stuffed skin of which now forms part of the collection of Western Canadian birds sent by the Board of Arts and Manufactures of Western Canada to the Paris Exhibition. Two others are those which formed the subject of my note of April 10, 1864, being successive states, both of them with less enlargement of the trachea than in the first specimen, but otherwise corresponding with *C. Passmori*, of which they are doubtless younger specimens. The series of changes in these three suggested the idea of a progress of development which might be thought to terminate in the very remarkable sternum and trachea which I described as properly belonging to *C. buccinator*.

At that time I had but one specimen of this curious form, which belonged to a full-grown male Trumpeter, and I had not seen what I could be sure was the young of the Trumpeter, to ascertain its agreement or otherwise with my supposed species. I was thus, perhaps, too hasty (though, it now appears, substan-

tially correct) in supposing the two forms of sternum before me to be both mature, and consequently belonging to different species; but the doubt is now, I think, decided. During the past winter a female Trumpeter Swan with a very young male (a cygnet of the year) were shot in the immediate neighbourhood of this city. They were examined by me, and their sterna are before me.

The female, a mature bird, had a sternum exactly resembling that which I previously possessed (fig. 7 of the sketches accompanying my paper), proving the peculiarity to be neither a mark of sex nor an unusual exceptional case. The young male had the foxy colour on the head and neck which is characteristic of *Cygnus buccinator*, but (as might have been anticipated from other cases of the kind) with the colour stronger and more extended than in the old bird, thus differing strikingly from *C. Passmori*. His sternum is considerably longer than that of my largest *C. Passmori*, a little longer even than that of the female accompanying him; yet the trachea is in an early stage of development, the bone on the inner posterior face of the sternum not yet appearing, and the knob close to the vertical bone only equalling the height of the ridge of that bone, instead of rising, as in the mature bird, about an inch above it. In the specimen of *C. buccinator* previously examined the bony enlargement containing the curve of the trachea almost concealed the posterior sinuses of the sternum, as noticed in my former paper; but in the young bird we find them deeper and more elongated in form than in *C. Passmori*; and even after the formation of the bone, this difference may be observed by careful examination. On the whole, this young bird may be regarded as proving that *C. Passmori* is not the mere young of *C. buccinator*, from which, as well as from the old bird, it differs in size, weight, colouring, and the other characters pointed out, even the sternum differing before the trachea assumes the peculiar full-grown appearance. But there is another point settled by the additional specimens. I have now before me, both in the young and mature condition, the bronchial tubes of the two species, those of the true *buccinator* having been, as I stated, destroyed in the former specimen, and the extent and constancy of the differences reported being then uncertain. I can now state that, in *C. Passmori*, the lower portions of the bronchial tubes are separate and comparatively little swelled, the upper tubular parts being nearly parallel; whilst, in *C. buccinator*, the greatly swelled and enlarged lower portions adhere together, the

upper tubular parts receding from one another at a curve. This seems to be a constant and important character. I hope these details, taken in connexion with the statements made in my former paper, will be thought to justify the strong conviction I now entertain that *C. Passmori* must be received as a species. The close resemblance in general external appearance, with the difference in size, weight, and a few points of structure, may remind us of *Bernicla Hutchinsii* as compared with *B. Canadensis*. These birds are still often confounded even by sportsmen, the former being passed as the young of the latter; yet no doubt can be entertained by the scientific zoologist of their being specifically different.

I am indebted to Mr. Passmore for his attention in procuring my additional materials, and for his valuable aid in some of the investigations required.

Supplement to the List of Australian *Longicornia*.

By FRANCIS P. PASCOE, F.L.S. &c.

[Read June 20, 1867.]

THE most interesting of the following additions to the *Longicornia* of Australia are from Cape York, the extreme northern point of the continent. They were a part of a small collection of Coleoptera made by a German naturalist, which had doubtless previously yielded some of its choicest specimens to the Sydney entomologists. Judging from what remained, the collection had a completely Australian character, a few of the commoner forms of the middle and southern portions being, however, very feebly or not at all represented—*i. e.* the Buprestidæ, Hesthesis, the Stenoderinæ, Phoracantha, the smaller Lamellicornia, &c.; of one of the Colydiidæ, *Dastarcus porosus*, Walk., hitherto only found in Ceylon and Borneo, there were several specimens. Of the Lamiiidæ, the genera *Sodus*, *Atyporis*, and *Menyllus* * have now to be added to the Australian fauna. *Batocera læna*, Thoms., and *Pelargoderus Arouensis*, both hitherto restricted to New Guinea, appear to be common. *Glaucytes*, a genus found in the New Hebrides, some of the Malayan islands, and even in Madagascar, has now a representative in Australia.

* *Menyllus maculicornis*, from Aru, described by me from a single specimen, not in the best condition, in the Wallacean collection, was unfortunately forgotten when I described *Sysspilotus Macleayi*, with which it is identical. The latter name must therefore be cancelled.